DOCUMENT RESUME

ED 112 445 95 CS 501 120

AUTHOR Davis, Robert E.
TITLE Introduction to Film Making.
INSTITUTION ERIC Clearinghouse on Reading and Communication Skills, Urbana, Ill.; Speech Communication Association, Falls Church, Va.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Oct 75
CONTRACT NEC-400-75-0029
NOTE 56p.; Theory into Practice (TIP) Series
AVAILABLE FROM Speech Communication Association, 5205 Leesburg Pike, Falls Church, Virginia 22041 ($1.40 members, $1.50 non-members); National Council of Teachers of English, 1111 Kenyon Road, Urbana, Ill. 61801 (Stock No. 23694, $1.40 members, $1.50 non-members)

EDRS PRICE MF-$0.76 HC-$3.32 Plus Postage
DESCRIPTORS Animation; Communication (Thought Transfer); Editing; *Film Production; *Films; Higher Education; Learning Activities; *Photographic Equipment; *Production Techniques; Secondary Education; Teaching Methods; *Visual Literacy

ABSTRACT

This booklet is intended for teachers who are now teaching units in film production as part of a program in communication or who wish to begin work with filmmaking in such a program. The first section is intended to serve as a brief introduction to film theory, while a major portion of the rest of the booklet is devoted to film projects which may be used with classes. Exercises included for teachers without access to filmmaking equipment may be carried out with pencils, paper, and other readily available classroom materials. Other exercises using super-8 cameras and equipment are also suggested, as are activities using videotape recorders and still cameras in place of motion picture equipment. All exercises and activities are designed for adaptation to grade and ability levels by the teacher. (LL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED 074743

THEORY INTO PRACTICE

Introduction to Film Making

Robert E. Davis
University of Texas at Austin

ERIC Clearinghouse on Reading and Communication Skills
1111 Kenyon Road, Urbana, Illinois 61801

Speech Communication Association
5205 Leesburg Pike, Falls Church, Virginia 22041

CS 581 720

Speech Communication Association Publications Board David Mortensen, University of Wisconsin, Madison, *Chairman* / Carroll Arnold, Pennsylvania State University / Rita C. Naremore, Indiana University, Bloomington / Russel R. Windes, Queens College, New York / William Work, Executive Secretary, Speech Communication Association

Published October 1975

ERIC Clearinghouse on Reading and Communication Skills
1111 Kenyon Road, Urbana, Illinois 61801

Speech Communication Association
5205 Leesburg Pike, Falls Church, Virginia 22041

Printed in the United States of America

The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Prior to publication, the manuscript was submitted to the Speech Communication Association for critical review and determination of professional competence. This publication has met such standards. Points of view or opinions, however, do not necessarily represent the official view or opinions of either the Speech Communication Association or the National Institute of Education.

Foreword

The Educational Resources Information Center (ERIC) is a national information system developed by the U.S. Office of Education and now sponsored by the National Institute of Education. It provides ready access to descriptions of exemplary programs, research and development efforts, and related information useful in developing more effective educational programs.

Through its network of specialized centers or clearinghouses, each of which is responsible for a particular educational area, ERIC acquires, evaluates, abstracts, indexes, and lists current significant information in its reference publications.

The ERIC system has already made available—through the ERIC Document Reproduction Service—much informative data, including all federally funded research reports since 1956. However, if the findings of specific educational research are to be intelligible to teachers and applicable to teaching, considerable bodies of data must be reevaluated, focused, translated, and molded into an essentially different context. Rather than resting at the point of making research reports readily accessible, NIE has directed the separate ERIC Clearinghouses to commission from recognized authorities information analysis papers in specific areas.

In addition, as with all federal educational information efforts, ERIC has as one of its primary goals bridging the gap

between educational theory and actual classroom practices. One method of achieving that goal is the development by the ERIC Clearinghouse on Reading and Communication Skills (ERIC/RCS) of a series of sharply focused booklets based on concrete educational needs. Each booklet provides teachers with the best educational theory and/or research on a limited topic. It also presents descriptions of classroom activities which are related to the described theory and assist the teacher in putting this theory into practice.

This idea is not unique. Nor is the series title: *Theory Into Practice* (TIP). Several educational journals and many commercial textbooks provide teachers with similar aids. The ERIC/RCS booklets are unusual in their sharp focus on an eudcational need and their blend of sound academic theory with tested classroom practices. And they have been developed because of the increasing requests from teachers to provide this kind of service.

Topics for these booklets are recommended by the ERIC/RCS National Advisory Committee. Suggestions for topics to be considered by the Committee should be directed to the Clearinghouse.

Bernard O'Donnell
Director, ERIC/RCS

Preface

This booklet is intended for teachers who are now teaching units in film production as part of a program in communication or who wish to begin work with film making in such a program. Topics covered include the history of the film and its role in society, types of films and the communicative purposes they serve, the mechanics of film, and the process of film production. A selected bibliography of basic film books is included at the end, and teachers working with film now or planning to do so in the future are urged to use these books to supplement the materials summarized here. The "Theory" section is intended to serve as only the briefest of introductions to the topics covered.

A major portion of the booklet is devoted to film projects which may be used with classes. These exercises were developed and are presented with the following assumptions in mind:

1. Some teachers will have access to no film-making equipment. Therefore, exercises are included which may be carried out simply with pencils, paper, and other readily available classroom materials. Teachers should consider the purchase of at least one-hundred feet of clear film leader for use by their classes in addition to the materials just mentioned.

2. Most teachers will have at least limited access to some form of motion picture equipment—a super-8 camera which may be borrowed from the family of a student, for example. All the suggested exercises may be done as class projects with all class members participating, although it would be more meaningful for the participants if the work could be done in groups of approximately three students.
3. Video tape recorders and still cameras can be used as substitutes in a number of the exercises if no motion picture equipment is available. In some instances (the lighting exercise or the project on shot sequence, for example) the use of video tape is preferred because of the value of the immediate visual feedback. Other exercises may be done at minimal cost by using a still camera such as a Polaroid or an Instamatic.
4. All exercises can be adapted to all grade and ability levels by the teacher. Using the techniques described in the "Practice" section of the booklet, for example, a kindergarten group could produce a television commercial on film, as could a level-14 class. The two commercials would obviously differ in degree of sophistication, but the basic concepts are the same for each level. In each instance, the teacher would have to adapt the exercise to the students' grade level.

It is often said that this is the age of mass communication. Students presently in school have been strongly influenced by both film and television. They are excited by these media and are eager to learn more about them and their role in society. Students especially enjoy doing production work. This booklet, hopefully, will provide a means for the teacher to give students an opportunity for production experience in a manner which will be not only educationally rewarding but enjoyable as well.

Theory

The birth of the American motion picture as a public entertainment is traditionally dated from March 23, 1896, when Koster and Bial's Music Hall in New York City screened a program of short films made by the Edison Company. According to the *New York Times*, which reviewed the program the next day, the films "were all wonderfully real and singularly exhilarating." Audience response was enthusiastic. Five years earlier, on June 13, 1891, *Harper's Weekly* had announced Edison's plans for the kinetograph, a machine which was to show moving pictures accompanied by sound from the Edison phonograph. Other inventors, working at the same time both in the United States and abroad, were also attempting to make pictures move. Many of these inventors succeeded at approximately the same time. Louis and August Lumiere, for example, screened a program of films for a paying audience in Paris on December 28, 1895. Robert Paul introduced his projector, called the Theatrograph, in London in March of 1896. Wherever shown, the moving pictures were hailed as the newest wonder of a mechanical age. As stated in *Harper's Weekly* in 1891, "By supplying illustrations . . . for school-books and travels, and by preserving for future ages vitalized pictures of each passing generation or of historic events, the kinetograph may yet play a part of incalculable importance in human life."

The early years of the motion picture industry established patterns which have continued to the present. Some of the earliest pictures documented familiar scenes—groups of workers leaving a factory, the streets of a city, a baby being fed, and a train pulling into the station. Other pictures reported newsworthy events of the day. Still other films, as early as 1897, created short advertising messages for cigarettes, cereals, and household cleansers. Other films were strictly educational; pictures were made to supplement with scenes from real life the lessons learned in the classroom by students in the elementary grades through medical school. The most common and most popular films of all, however, were those made purely for entertainment—stories of adventure, fantasy, and romance which for a brief period took the viewer away from the real world to create a new mode of reality, like a dream, on the screen.

The history of the motion picture is a story of the evolution of popular entertainment, the growth of an art form, and the development of a major national business. Although the first three decades of film history are labeled the "silent period," movies from the beginning were accompanied by music. At first there might have been only a pianist or a few instrumentalists, but later, by 1915, many films were accompanied by full orchestras, and most theaters had at least an organist to accompany and interpret the images flashing on the screen. During this early period, there were a number of attempts, none of them commercially successful, to develop some kind of recorded, synchronized sound for films. Then, in 1927, Warner Brothers found the right combination of star, story, and sound system with Al Jolson, *The Jazz Singer*, and Vitaphone. Public response was tremendous. All the major studios rushed into sound production, and by 1930 the business, on the basis of public demand as expressed at the box office, had converted to sound. The movies moved into their second major period, the era of the "talkie."

For the next twenty years, from 1930 to 1950, movies were the principal form of popular entertainment in America, with only radio offering any real competition. The growth of network television following World War II, and the increased importation of foreign films at the same time, diminished movie audiences, creating an economic crisis of major proportions in the American film industry. Box office receipts dropped; eventually, production decreased from a high of some 700 features a year to just over 200. Neither 3-D pictures, nor

various wide-screen processes, nor movies with stereophonic sound recaptured the dwindling audiences. After a bleak decade, television rediscovered the feature film and began programming movies in prime time. Feature-length dramatic films made especially for television were introduced, and filmed documentaries for television gained increased popularity. The Motion Picture Production Code was revised; a classification system was introduced; theatrical films began to deal with more varied, sophisticated, and, for some, controversial subjects for specific audiences within the general movie-going public; and the movies were back in business. The production of nontheatrical films continued to grow throughout the slump in the theatrical film business, and these films, about which more will be said later, remain a vitally important part of the nation's communications system. The shape of movies has changed, and, as predicted in *Harper's Weekly* over eighty years ago, films have indeed come to "play a part of incalculable importance in human life."

Film Types

Films continue to be used for a great variety of purposes in contemporary society. Entertainment, whether provided by feature films shown in theaters or on television, is one of the primary purposes films serve. Narrative feature films—produced for entertainment; distributed internationally; screened in 11,116 theaters and 3,840 drive-ins in the United States; and shown on network and local broadcast television, on pay and cable TV, and in a variety of other settings, including classrooms—have always been the most visible and profitable product of the American motion picture industry. According to *Variety*, ninety-four feature films reported a box office return of over $1,000,000 in 1974, for a total of $590,837,000. The Gallup Poll reported that movies were twice as popular in 1974 as they were in 1966. Audience patterns, however, have shifted. Today 80 percent of the audience is made up of patrons between the ages of twelve and thirty, whereas the audience age spread used to be much wider.

One way to group films which provides a focused approach is by genre or type—for example, westerns, musicals, gangster and crime pictures, horror films, science fiction films, psychological dramas, social message films, or adventure pictures. Students should be made aware, however, that these classifications are not fixed and will change over time. It is also important to note that some films defy strict classification and

are representative of several genres. No matter what genre the film is placed in, however, it remains that feature films are a story-telling medium dealing with events which happen to people through time in definable space. Traditionally, narrative films attempt to produce an illusion of reality on the screen. The stories told may deal with a distant past or an equally distant future, but in either case production techniques are employed to cause the viewer to accept what is seen on the screen as real. Settings, costumes, acting, shot patterns, editing, sound, and music all contribute to this illusion of reality. Drawing upon film-making conventions developed over the past seventy years, movies manipulate both time and space to create a unique kind of cinematic time and space and, in the end, reality. One of the clearest statements about the relation of film to reality was made by Hugo Munsterberg, a psychologist writing about the motion picture in 1915. He observed that motion pictures, as differentiated from other forms of art, overcome space, time, and causality and thus operate with a freedom similar to that of mental experiences. Films work like the mind. More recently, the philosopher Susanne Langer described film as most resembling the dream. In either case, however, film permits its creator to reproduce on the screen, as if in life, images which may have existed before only in the mind. Thus, the strength of the narrative film and its unique character grows from its capacity to function, as does the mind or a dream, free of the restrictions imposed by conventional time and space.

It should also be noted that the techniques for story-telling characteristic of the feature film are not limited only to this form. The thirty- or sixty-minute television dramatic program, shot on film, employs the same basic techniques. They are often used in television commercials as well. Documentary and other nontheatrical films also borrow techniques from the narrative film, techniques of film narration are equally apparent in the story film made by a third-grade student. Certain basic techniques of film writing, shooting, and editing are common to all levels and forms of production.

Films used for purposes other than entertainment are often generally classified as nontheatrical films. These pictures, and this classification encompasses a variety of types, account for a major share of the motion picture market in the United States. For example, some 32,670 nontheatrical films were made in the United States in 1973, the most recent year for which figures are available. The dollar value of these films was $636,000,000.

These figures do not include films made specifically for television, which, if included, would increase both the number and dollar value appreciably.

Most generally visable of the nontheatrical films are the documentaries, those films which record, report, and interpret events both past and present. Since the motion picture camera is an excellent recording device, some of the earliest films made were simple visual records of places and people. These early films have now become an important resource for the study of history. From these films, the documentary developed in its many forms. Originally made in the 35mm format for showing in theaters, documentary films are now most commonly made with 16mm equipment for use on television. The subjects range, still, from simple visual reports to complex analyses of social and political situations. A survey of the listings in *TV Guide* will quickly indicate the range of subject matter.

Films which are used for purposes of documentation are sometimes referred to as "films of fact" or "nonfiction" films. Such descriptions suggest that these films deal with reality more objectively, perhaps more fairly, than other forms of analysis and reportage. The viewer must realize, however, that even though the documentary may be undramatic in approach, filmed on location with real people, and dedicated to as much fidelity to fact as it is possible to attain, a great deal of selection is still involved in the making of any film, whether it is documentary or fictional. The initial framing of the scene in the camera is in itself a process of selection, as some parts of the total available scene are necessarily excluded. Selection occurs, too, in the choice of places, people, and ideas to be included both when filming and, later, when editing. Only in rare instances, as in perhaps a single long shot of an event in its entirety, does the film supply an objective visual record. Much more commonly, the documentary, nonfiction, or factual film is, at best, a selective view of reality.

Other forms of film documentation should also be mentioned. Included in this category are films shot for use on daily television newscasts. These short pieces certainly serve to record, reveal, and interpret the life of the times. Eventually, they will also be valuable as historical record. Similarly, most home movies could be classed as documentation; they provide an interpretative record of family affairs, and to the family they have immense value as historical record.

Thomas Edison predicted some seventy years ago that film would have great value for "instruction in sundry directions."

He was absolutely correct. Films used for various kinds of training in specific skills, general education, and instruction in the classroom today comprise an extremely important, although not highly visible, segment of the total film market. In a typical year, some 2,500 films are made specifically for use in the classroom. A university film library may contain as many as 20,000 items, all of them current. These films range from training in the performance of specific skills, such as the dissection of a frog; to introduction of single concepts in, for instance, social behavior; to analyses of complex theoretical constructs in mathematics. They are intended for use in schools, but they may also be employed by community groups' programs in continuing education or for personalized systems of instruction. Classroom, instructional, and training films likewise utilize the entire range of film production techniques—from live action, through animation, to the generation of images by computer. All share in common a careful selection of visual and verbal material, often devised through testing by experts in learning theory, adapting content and concepts to specific curricular needs and target audiences.

Films are also used to create consumer interest in products and services, to change or reinforce attitudes toward social issues, and to generate support for political candidates. The most visible of these persuasive messages are television commercials, but equally important are films which, in an attempt to influence viewer attitudes, take a specific point of view about social issues, candidates, legislation, or ideas. Included in this category are what in the past would have been called "propaganda" films, although this term is currently out of fashion. In all instances, again, the film makers carefully select and manipulate image and sound in order to best relate ideas to a defined public.

Motion pictures are also employed simply to present information, although it is often difficult to separate this kind of film from films used for instruction or persuasion. A company, for example, might have a film made which demonstrates the products it produces. A national volunteer organization might use film to sensitize viewers to the danger signals of a disease. Or a government agency might produce a film about new methods of land use. The principal purpose of all these films might be to transmit information to an audience, but the films might, at the same time, cause changes in viewer attitudes. Again, several thousand such films, ranging in length from a few seconds to an hour or more, are produced each year. Each

film employs the techniques and processes of film making in a particular fashion with a specific audience in mind.

A final film type consists of films produced to give an audience aesthetic pleasure or to give the film makers personal satisfaction and a vehicle for artistic self-expression. Included in this category are the pictures which, in a festival, might be classed as art films. Form, style, and content vary with each film maker, but again, the individual artist is working with a common repertory of basic techniques. A great many of these films are available, and they have made an important contribution to the artistic life of the nation. It is interesting to see techniques introduced by experimental film makers appear, a few months or years after their introduction, in commercials made for television or in feature films.

It must be recognized, in discussing the varied purposes for which films are made and the ways in which film makers artistically manipulate and restructure reality, that film making is also a business. This fact is most obvious in connection with the theatrical film, which depends on the box office to return a substantial investment, or the television film or program, which must maintain a sufficient percentage of the total viewing audience to survive. Film making is an expensive and time-consuming process. If a first film does not return its makers' investment, there is frequently no money to support a second film. This is too often the first hard lesson learned by young film makers.

Film Mechanics

All films, no matter what their purpose, have certain characteristics in common. For one thing, movement on the screen is an illusion. Films seem to move only because the human eye and brain are slow to erase visual images. An image seen by the eye is retained in memory for a fraction of a second longer than the image is actually presented. This physiological phenomenon, called persistence of vision, makes moving pictures possible. To create the appearance of motion, the film camera photographs and the projector later shows on the screen a series of eighteen (for silent films) or twenty-four (for sound films) still photographs, called frames, each second. In a film each of these photographs captures about one forty-fifth of a second of action. Shown in sequence, with a shutter blacking out the light and masking the movement from one frame to the next, the pictures appear to move because the eye retains the image just long enough for the succeeding image to

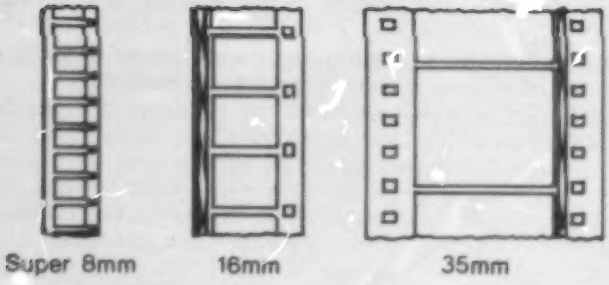
be flashed on the screen. The pictures thus seem to be continuous and to move. In reality, the frames are presented intermittently and are merely still snapshots slicing off pieces of a continuous action. Motion pictures are the result of a mechanical adaptation to a physiological phenomenon.

Film, the material, consists of photographic emulsion spread thinly on a cellulose acetate or plastic base. When film is run through a camera, individual photographs are taken at the rate of eighteen or twenty-four times each second. Film thus advances in the camera in short bursts of movement. As the film is stopped and held in place for about one forty-fifth of a second, a shutter opens, the exposure is made, the shutter closes, the film is advanced by the pull-down claw or intermittent movement, the shutter opens, another exposure is made, the shutter closes, the film advances again, and so on, until the roll of film is completed. The individual photographs are called frames, and thus the phrase "frames per second" is used when speaking of the rate of movement of film through a camera or projector. There are sprocket holes along the edge of the film. The intermittent mechanism of the camera or projector engages these holes and uses them both to steady the film in its path and to advance the film one frame at a time.

Film is made in the following five sizes or formats: super 8mm and regular 8mm, for home use; 16mm, for both amateur and professional use; 35mm, for the majority of theatrical films; and 70mm, for use with certain of the wide-screen processes. Illustrated here are the four gauges of film, approximately actual size (see diagram). (Regular 8 is not shown. It differs from super 8, now the more common gauge, in the size of both the sprocket holes and the individual frames.)

To create images, a lens system is also needed to focus light on the film and to control the amount of light permitted to strike the film. The shutter controls the length of the exposure, but the lens controls the amount of light which passes through an adjustable iris diaphragm. A camera thus consists of a light-tight enclosure to hold the film, an intermittent movement to advance the film frame by frame, a shutter to mask off the light between exposures and to control the length of exposure, and a lens to focus the image on the film and to control the amount of light striking the film.

A projector may be considered a camera in reverse—it shows pictures instead of taking them. It has reels to supply and take up film, a light source to illuminate the image on the screen, an intermittent movement to advance the film, a



shutter to mask the light between frames, and a lens to focus the image on the screen. In addition, it may have a sound head, amplifier, and speaker to reproduce sound on film.

Sound may be recorded directly on the film as the pictures are made (single-system sound) or on a separate magnetic tape recorder synchronized with the movement of the film through the camera (double-system sound). If double-system sound is used, the sounds recorded on the one-fourth-inch magnetic tape will have to be transferred to the film after the film is processed and edited. Sound tracks are either optical or magnetic. Optical sound tracks convert the pressure variations (vibrations) which constitute sound into photographic images of the variations in pressure on one edge of the film. These photographic variations are read by the sound head of the projector as the film is run and reconverted to sound in the speaker. Magnetic sound tracks, which are used mainly in super-8 system, for 16mm news film, and to reproduce multitrack sound for some theatrical films, consist of a stripe of magnetic material on one edge of the film. The sound is

reproduced on this *mag stripe*, as it is called, the way it is in a tape recorder.

In order to permit projection of sound films, since picture movement is intermittent and sound-track movement must be continuous, the sound head in a projector is located physically apart from the lens and shutter system. In 16mm film, a given sound will occur on the track twenty-six frames (in optical sound) or twenty-eight frames (in mag sound) ahead of the frame on which the related picture is located. Placement varies in super-8 equipment, but sound and picture will be separated. The necessary separation of sound and picture, called *sound advance*, makes the editing of single-system material very difficult. With camera-original, single-system sound material, the film makers usually simply edit for sound and do not attempt to fine-edit the picture.

Most student films probably cannot employ double-system synchronous sound. Students should be made aware that sound recorded on a home tape recorder will never synchronize with the picture, even though the picture is taken and the sound recorded simultaneously. There is too much variation in speed in the drive mechanisms of the various machines. Single-system sound can be recorded on some home super-8 systems. Editing is difficult with single-system sound for the reasons explained previously. For most student films (unless relatively sophisticated 16mm equipment is used, and that is costly), music is utilized as accompaniment for picture, just as it was in the early days of the industry. Some very creative and sophisticated sound tracks can be made in this way.

Animation in film has long been of interest to students. Many films among recent winners in the various festivals for student film makers have employed some form of animation. Animation consists of single-frame filming of objects, persons, or drawings, moving or changing the position of the film subject slightly between each exposure. Filmed with one or two frames exposed for each subject move and projected at eighteen or twenty-four frames per second, objects and persons come to animated life on the screen. To do animation, the film makers need a camera (super 8 or 16mm) which will shoot single frames, a cable release, and a tripod or other secure mount for the camera. The planning process for animation should be undertaken very carefully with all moves plotted before shooting starts. Otherwise, keeping track of what has been done can become a major problem. (See exercises 2, 8, 9, 10, and 11 for projects in animation.)

The Film-Making Process

A brief summary of the common steps in the process of making a film is presented here. The film making process is divided into the following three basic stages: preproduction, production, and postproduction. Each stage is considered separately. The material included in the discussion is intended to refer to student film production; therefore, some steps associated only with professional film making have been omitted. The steps outlined here will provide a general guide to production. (Readers interested in a more complete treatment of the production process should refer to the following books: Lee R. Bobker, *Making Movies from Script to Screen;* Lenny Lipton, *Independent Filmmaking;* and Kirk Smallman, *Creative Film-Making.*)

Preproduction. Preproduction is the planning stage for the film. At this time, all the arrangements are made for actually doing the film, all equipment is obtained, and all personnel are selected. If preproduction planning is done carefully, the production of the film itself will be greatly simplified.

The idea for the film must be clearly defined, the target audience determined, and research completed before much else can be done. Every film, no matter how large or small, begins with a basic idea, premise, or thesis. A film's basic idea is usually vague in the beginning and must be crystallized and refined in order to determine what actually is to be accomplished in the picture. Sometimes, a list of objectives is written out, further defining the idea and clarifying the purpose of the film. As the idea is developed, the target audience should be identified. What kind of person is the picture intended for? What response should the picture elicit from this person? In other words, what is the reason for putting the idea on film? The film makers should also determine early in preproduction what the dominant style of the film is to be and whether the movie is to be shot in black and white or color. These questions answered, or at least approached, research can begin, if necessary, to add detail and substance to the idea. Research might deal not only with technical aspects of the story but also with costume or language. Research should provide information not readily available to the film makers about the subject of their film.

Once the film idea is reasonably firm, some crew positions should be established. The film planning group should designate, as soon as possible, a producer who will be the administrative and business supervisor of the production.

Writing responsibilities should also be designated at this time. A director can be appointed simultaneously, or this appointment can be deferred until the development of the project is more solid. Other crew positions should be assigned later. If outside funding or other support is to be sought, a *treatment*, which usually consists of a one-page summary of the idea of the film, should be prepared. The treatment may also deal with the purpose, audience, and proposed distribution of the film.

Scripting can begin once the idea, purpose, audience, and style have been agreed upon. The script is the written plan for the film and should include a breakdown of the scenes and shots, all dialogue, and a description of all action and locations. Script format varies according to the type of film to be made. A cinema verité documentary, for example, might not be scripted at all, or it might be shot on the basis of a rough outline, while a narrative film would normally be scripted in precise detail. Animated films should also be scripted as carefully as possible, with all the action plotted as to the number of frames per move and the size of all moves. (See exercises 20 and 21.)

Once the script is completed, storyboards may be drawn for key scenes or, what is even more desirable, for all shots in the film. A storyboard panel contains a drawing of an individual shot setup showing the angle of the shot, the background, and the action to be included. Storyboards are also very helpful in planning animated films. The storyboards may be used by the director and crew for guidance during filming. (See exercise 6.)

The production schedule is the timetable for the film. At a minimum, it should indicate the time frame for all production activities, and it may go into precise detail as to the time allotted for each shot and other production activity. The production schedule can be designed as a flow chart of all the activities to be accomplished in making the picture. The schedule often begins with the planned, or necessary, completion date of the film, with all activities back-timed from this deadline. The production schedule should be drawn up as realistically as possible. It will not be useful if there is no possibility of meeting the established deadlines.

The budget for the film should be based on a careful determination of how much it will cost to realize planned ideas. One major factor in the budget, of course, is the cost of film and processing. A reasonable estimate is $2.00 per minute of

screen time for super-8 film (including film and processing) and $6.50 per minute for 16mm film. These costs apply to all film shot, not just the film kept for use in the final picture. If equipment is not available, it may be rented; but this is another major cost factor. An estimate of all costs associated with the realization of the script should be included in the budget. This budget should be drawn up before shooting begins because the projected budget might cause some revision in the script or even in the basic idea of the picture. In the end, cost may determine how ambitious a film project can be.

Casting, if actors are to be used, can take place any time after the basic script is agreed upon. Tryouts may be held, or actors may be selected on the basis of physical type. Agreement should be reached with the actors before filming starts as to whether or not they are to be paid and, if so, how much. Actors in student films are often paid in experience and screen credit. Each actor, or any other person appearing in the film at the request of the film makers, should be asked to sign a release.

Locations should be scouted and secured well before production starts. Permission to film should be secured for private property and for interiors of public buildings. Some places have established restrictions on filming. As a rule, no permission is needed to film public events and public areas out of doors. Permission should be secured in advance for any specialized locations or for any places about which the film makers have questions.

During preproduction, arrangements should be made for obtaining all equipment which will be needed. These arrangements should be finalized well before shooting is to begin, and all equipment should be tested. That is, a test roll of film should be shot in the camera, and recordings should be made on the tape machine. The film stock to be used should also be purchased in advance. The amount of film to be purchased will depend on the length of the film and the planned shooting ratio for the picture. If, for example, the film makers plan to shoot twice as much film as will be used in the final edited version, the shooting ratio is 2:1. They should then purchase at least twice as much film as they plan to use in the final version. A shooting ratio of 5:1 is not at all unusual for many professional films, and the shooting ratio for some documentary films runs as high as 20:1.

The film crew should be selected as part of preproduction planning. The minimum crew for a film would probably consist

of the producer, a director, a cameraperson, a soundperson, a script clerk, an editor, and at least three *grips*, that is, persons to assist with props, scenery, and other general work. It would be helpful for each person serving in a major position to have an assistant. In general, however, the smaller the crew the better, though there must be enough people to do the necessary work. Assigning the crew early permits crew members to become familiar with their duties. They should use the preproduction period to study the script and become aware of any special problems connected with the shooting. The director should use the preproduction period to analyze the script and prepare shooting plans. If preproduction procedures are done properly, the actual shooting of the picture will be vastly simplified. Shooting a film is hectic enough without at the same time having to do work which could have been done well in advance.

Production. Production is the actual shooting of the film. During shooting, the director should be responsible for setting up the shots and working with actors on their performances. The concepts of shot sequence, screen direction, distraction, and visual composition should always be clear in the director's mind (see exercises 13, 14, 15, and 16). The cameraperson should set up the camera and take all shots and is responsible for focus as well. If lighting is used, it should be taken care of by either the cameraperson or the assistant cameraperson (see exercises 17 and 18). Most super-8 cameras have built-in light meters. In case the camera being used is not so equipped, the assistant cameraperson should be responsible for taking light readings and setting exposure. The soundperson is responsible for all recording. A script clerk should be on hand to keep track of script details. Several grips should be available to assist with the production work. The producer should oversee the general shooting arrangements. During shooting, careful attention must be paid to each shot to make certain that it does what the script or shooting plan calls for.

To begin shooting, the film crew should go to the first location called for in the script. Working with the cameraperson, the director should set up the first shot. The soundperson should set up the recorder and check for sound quality. After rehearsing the actors, the director should call for a camera rehearsal in which all crew members should participate as if it were a take. However, no film should be rolled.

To start the take, or the rehearsal, the director should ask for quiet on the set and should say, "This is a take [or

rehearsal]." Then the director should say, "Roll sound. Roll camera." The cameraperson and soundperson should respond by saying, "Rolling." Then the director should say to the actors, "Action." At the end of the take or rehearsal, the director should call, "Cut." The cameraperson and soundperson should report at the end of each take whether or not the take was satisfactory from their points of view.

Before a shot is taken, it should be *slated*, that is, the shot should be identified visually on the film by taking about a foot of film of a small chalkboard on which is written the name of the film, the name of the director, the number of the shot, and the number of the film roll. The take should also be identified vocally on the sound track. A log of each shot should be kept by the script clerk. This log will be useful in editing, will serve as a record of what has been shot, and will indicate which takes are to be used.

Most student films are made without dialogue. It is helpful, however, to record background sound on location so it can be used later in the track, as background. If dialogue is to be used, it must be ascertained that the microphone is picking up the actors clearly, at a sufficient level, and that background noise does not cover the dialogue. Music and sound effects should be added later.

Filming may be done either in sequence or out of sequence. Shooting in sequence would probably be safer for an inexperienced crew, but it would certainly take longer. Shooting out of sequence demands more careful attention to the details between shots, but it is much more efficient. In either case, the script clerk and the director should be extremely careful to make certain that action, costumes, and props match from scene to scene. Otherwise, there might be disastrous *jump cuts*, unintended discontinuities in action, costume, props, or background from scene to scene or even from shot to shot. It is not unusual to see such jump cuts on television programs, which are shot of sequence and in a hurry, or even in feature films. A character, for example, may appear wearing an apron in one shot, be seen with the apron missing in the second shot, and be wearing it again in the third shot. Jump cuts, incidentally, can be used in a film for some very funny and interesting effects if carefully planned. Whether filming is done in or out of sequence, once production is started, shooting should be continued, shot by shot, until the film is completed.

Postproduction. Postproduction, in professional films, consists of film editing, transfering and editing sound materials,

preparing sound and music tracks, preparing titles, making answer and release prints, and arranging for distribution of the film. For student films, the postproduction process is usually somewhat simpler. Whereas professional film makers never screen the original camera film, student film makers commonly use their originals for screening and editing and as the final version of the film, partly because of cost and partly because of the difficulty of getting work prints made from super-8 materials. In 16mm or 35mm production, a work print is immediately made from the original footage, and all editing is done with the work print. When the editing is finished, the original film is conformed to the edited work print, and prints are then made from the original. Using the original footage, student film makers need to exercise great care in handling it. Film scratches easily, and all scratches show up on the screen. Film also attracts dust. When working exclusively with original footage, film makers should treat it as gently and as carefully as possible. All damage is permanent, and there is no duplicate.

To begin the editing process, the film makers should screen the entire film and evaluate each shot. They should then break down the footage by cutting it apart into the separate shots, leaving all takes of each shot together. Using Mylar quick splices or other tape splices, they should splice shot 1 to a six-foot length of white leader, then splice shot 2 to shot 1, and so on, arranging all the shots in the order called for in the script. When this is done, they should go back and evaluate the film again, cutting out and reassembling in order the takes they want to keep. (If they are working without a script, as in a documentary, they should make a log of all the shots available, make a list of shots in the order they are to be used from the log, and cut the film on the basis of the shot list.) They should view the assembled film again and then begin the process of fine-cutting, eliminating those parts of shots which are not essential to the film. They should work carefully. It is easier to go back and cut off more film than it is to replace footage cut out. In all the editing, they should keep in mind the principles of visual continuity, screen direction, and distraction (see exercises 13, 14, and 15).

The sound track may be prepared either before or after the picture editing. In some instances, as in some types of documentaries in which the sound is voice over, it is easier to edit the sound first and then cut the picture to the sound. For beginning film makers using relatively unsophisticated sound, it

is probably better to edit the picture first and then add the sound track. The simplest solution to the sound problem for student film makers is to prepare a general sound track, perhaps with some voice-over narration, music, general background sound, and sound effects. They should not plan to have the sound synchronize exactly with the picture. Super-8 and most amateur 16mm equipment is simply not sophisticated enough to permit such matching. They should choose music which complements the theme and action of the picture. Such music can be combined with background sound and appropriate sound effects if the effects are not to be exactly matched with action. Sound effects may be recorded from actual locations or may be taken from sound-effects records. The voice-over narration of nonsynchronous dialogue is layed in, and the track is complete. This description of preparation of the sound track has been based on the assumption that some sound-mixing equipment is available. Most stereo tape recorders can be used for the procedures described here. If no mixing equipment is available, appropriate music should be selected and used to accompany the film. Students should be made aware of copyright limitations on the use of music and any other commercially recorded materials.

While the film is being edited and the sound prepared, other members of the crew can work on the titles. The titles should name the film, the producing group, the director, the crew members, and all actors. Titles may also be used to thank persons or agencies for assistance. Individual title cards may be prepared, each one with a specific piece of information on it, and photographed for editing into the film; or titles can be shot in the locations where the film was made, even during the shooting of the film. The only limitation on titles is the ingenuity and creativity of the film makers. In all cases, the film makers should try to create and design titles which complement the film, and they should try, if possible, to avoid long lists of credits on the screen. A common flaw in student films is overkill in the titles—everyone, including the family dog, is thanked for their patience, understanding, and assistance.

When the picture is edited and the sound track completed, the film can be projected with sound provided by a tape recorder, or a record player can be used to add music. It is possible to send the edited film to a laboratory and have it mag striped for sound and the tape-recorded sound transferred to the stripe on the film. This procedure provides a print which

may be run on a sound film projector equipped for magnetic playback. Most commonly, however, student films are accompanied by taped sound on a reel-to-reel tape or cassette. In 16mm production, an optical track could be put on a print of the film made from the original material. This process is complicated and expensive and so may be inappropriate for a beginning level of production. No matter how the film is to be exhibited, the screenings should be well planned and smoothly executed. The screening room should be dark, and the sound should be clearly audible. The projector and sound equipment should be set up and tested in advance. The film and the sound should be cued up as final preparation for a screening before an audience.

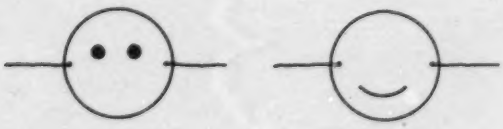
Student film making can be a creative and rewarding experience. Some exceptionally fine films have been made with the simplest of cameras and tape recorders. The degree of sophistication of the equipment is really far less important than the quality of the ideas communicated and the care and creativity demonstrated by the production. A fine idea, well filmed, can survive even the poorest quality equipment.

Practice

1. Making a Thaumatrope

Purpose: To demonstrate the principle of persistence of vision.

Give each student, or have each student cut out, a disk of white cardboard two inches in diameter. Have the student punch a small hole at both the left and right edges of his or her disk and tie a four-inch length of string in each hole. To introduce the exercise, draw two eyes on one side of a disk and a smiling mouth on the other side (see diagram). When the strings are twirled between the fingers, the eyes and mouth will seem to be on the same side of the disk. The reason for this illusion is the physiological phenomenon of persistence of vision. Have the students create various other drawings which can be used to make thaumatropes.



2. Animated Flip Book

Purposes: To demonstrate the principle of persistence of vision. To illustrate the basic principles of film animation.

Using the right half of three-by-five-inch cards, have students draw a simple stick figure in five to ten stages of a simple motion such as raising an arm. In each drawing, keep the basic figure constant, changing the arm position until the movement is completed. Card 1 would show the arm down at the side of the body. Card 2 would show the arm raised slightly. Card 3 would show the arm slightly higher again. Continue to show changes in position in successive drawings until the arm is raised above the head (see diagram). Arrange

the completed drawings in sequential order by stacking the cards, card 1 on top, and stapling the left edge. Holding the stapled cards in the left hand, use the right thumb and forefinger to bend the deck in a bow, and let the right edges of the cards flip up rapidly. The figure's arm should appear to move. This apparent movement is caused by the phenomenon of persistence of vision. This sequence of drawings could, in addition, be the basis for an animated cartoon on film, with each single drawing, or *cel*, photographed on two successive frames of film. (To film animation, a movie camera with single-frame capability, a cable release, and a tripod are needed.) When projected, the drawings as photographed will appear to move, just as they did when the deck of drawings was flipped.

Experiments can be done with other drawings which may be animated in flip books or on film. The secret of smooth motion in animation is the number of moves into which an action is broken down. The ten-move animation of the arm movement, for instance, would be both faster and jerkier than the same motion drawn in twenty moves. When filming animation, it is best to begin by exposing two frames of film for each drawing. The number of frames exposed by drawing can

then be varied to change the smoothness of the motion on the screen and the screen time it takes to complete each action. One frame per move will probably be much too fast. At the rate of two frames per drawing, it would take eighteen drawings to make one second of screen time using super-8 equipment. Three to five film frames per drawing may be too slow on the screen. Smoothness of movement and duration of screen time in animation depend on the number of moves into which an action is divided and the number of film frames shot for each segment of the total action.

3. Creating a Film without a Camera

Purposes: To give students experience in artistic expression with color and form. To illustrate basic animation techniques. To demonstrate the importance of music, when used, as a compiement to the visual image.

Give each student a ten-foot length of clear 16mm film and make available a selection of magic markers. (Clear 16mm film, called *clear leader*, may be purchased from Eastman Kodak or other film suppliers through a local photographic dealer. Clear leader is included in the Kodak motion picture products catalog.) Have the students draw on the film. Some students may choose to attempt to animate small figures drawn on the film, while others may simply create interesting patterns of color and form. Encourage the students to experiment with different types of figures and colors on the film. All the drawings will come to life when the film is projected. After the drawings are complete, splice each individual piece of film end to end, forming a continuous loop. Project the loop without sound the first time. Then project the loop with different musical selections in order to illustrate the effect of different types of music with the film. A careful selection of music will create quite different impressions of the visual material.

Loops cannot be run on self-threading projectors. If no manual threading projectors are available, use longer lengths of clear film and do not attempt to make loops. If loops cannot be made, the individual pieces of film might be spliced together for projection. At sound speed, 16mm film runs through the projector at thirty-six feet per minute, so each thirty-six-foot length will provide one minute of screen time.

4. Analysis of a Film: Visual Language

Purpose: To introduce students to the concepts of shots and camera use in a commercial film.

Using an available film, project the film without sound and analyze with students the use of shots in the film. Note the use of the *long shot* (LS), *medium shot* (MS), and *close-up* (CU) and the compositional pattern within each shot. Note, too, the use of visual transitions in the film, such as fades or dissolves. What forms of transition, if any, were used between shots or between film sequences? Consider how editing was used to structure the film. The same film can be used to illustrate the use of music and sound effects by running the film with the projector lamp turned off and attempting to correlate sound and music with visual image. Analyze another film in the same manner to see if the techniques of the film makers vary. A television program can also be analyzed in this way. The focus of the exercise should be on the indentification of the visual language elements available to the film maker.

5. Selecting Details and Objects

Purposes: To illustrate the selection process which is a necessary part of both narrative and documentary film making. The exercise can also be used to demonstrate how a film scene can be built from a collection of details.

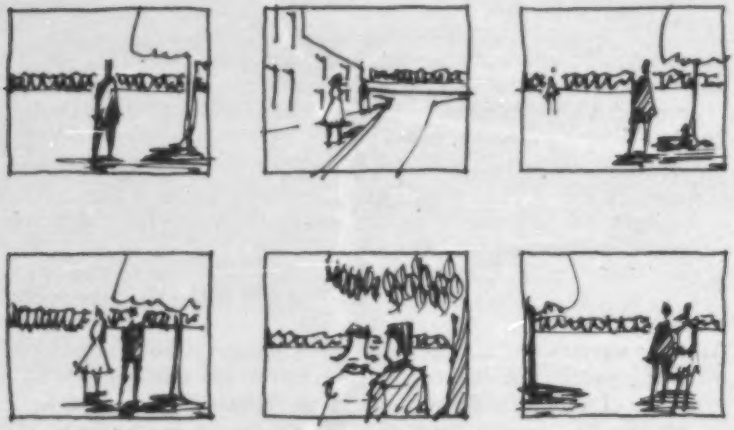
Have students select from their classroom various objects and details which they would use in making a film of the room. Ask them to indicate the size of each shot—LS, MS, or CU—and suggest an order of materials to create a visual sense of the classroom on film. A variation of this exercise would be to have students select details which would make the classroom seem on film to be either a pleasant or an unpleasant place. Another variation would be to do one version without any shots including people but still bring the room to life and suggest the presence of people. The second version would include people in the shots. The emphasis throughout this exercise should be on the importance of both objects and details in creating filmic reality. The exercise clearly demonstrates the importance of close-ups in the visual language of film.

If necessary, this exercise could be done using class discussion only. It would be better if students could either draw storyboard frames of the objects or use still cameras to photograph the objects to be used in the film. A film camera or video tape could also be used to complete this exercise. The use of still pictures or drawn storyboard frames provides an added opportunity for rearrangement of the materials to test various orders of presentation.

6. Making a Storyboard

Purpose: To illustrate the principles of visualization of materials for film and to work with visual organizaton of material.

Using an original story or one selected by the class, draw storyboards of the individual film shots to be derived from the material. Each drawn frame should illustrate one shot in the proposed film. In the drawings, both the action to be covered in the shot and the visual organization, or composition, of the shot should be taken into account. Include at the bottom of the individual card any dialogue which is to occur in the shot. Identify the type of shot, such as long shot or close-up. The following diagram shows several frames from a storyboard.



Arrange the storyboard frames in the order of the completed film. Next, go back and rearrange the frames in an order which might promote greater efficiency in shooting the film. For example, if several tight-face closeups are included in the script, it might be more efficient to shoot these all in one location, from one camera setup, assuming that no distinctive background will appear in the shot. Shooting out of sequence in this fashion is a common practice in film making and can save a great deal of time. The shots taken out of sequence can later

be edited into the film in their proper position. The use of storyboards allows the film makers to previsualize the shots and to arrange them in the most efficient order for shooting.

Using the storyboard technique, have the class create a series of one-minute commercials for television. The commercials may be for products, public service concepts, or information. In designing the commercials, the students should consider how visual images, music, and/or narration are used to create messages for a public. Also included in this exercise should be analysis of the target audience and consideration of how messages might be modified to appeal to different audiences. The exercise is complete with the creation of storyboards. These storyboards can be used, however, for the production of a class project film.

7. Still-Camera Documentation

Purpose: To give students practice in selecting details and organizing them for use in documentation.

Assume that the class is going to make a documentary film about a place. Using still cameras, Polaroid or Instamatic, have the students take twenty shots which will capture the essential details of that place. In taking each shot, consider whether it should be a long shot, medium shot, or close-up. After the film is processed, arrange the shots in an order which best captures the place visually. Using this form of documentation, students may attempt to realistically visualize the place, or they may use the shots selected to create a visual interpretation of the place.

8. Animated Environment

Purposes: To illustrate the basic principles of animation by the use of single-frame shooting. To illustrate the effects of different kinds of music with the same piece of film. To demonstrate one of the kinds of modification of reality possible through motion pictures.

This exercise requires a motion picture camera which shoots single frames. A 16mm camera is preferable, but a super-8 camera will work. Using the single-frame setting on the camera, shoot two frames of a number of different objects and/or locations in a room, or in one part of town, or even from a car window while driving down the street. The purpose of this exercise is to capture a full roll of single-frame images. An interesting variation of the exercise is to simply walk with the

camera, squeezing off a single frame with each two or three steps. A record of the environment will be captured on the film, but time and space will be greatly modified through the use of the single-frame technique. The single-frame technique is, of course, the basic principle of film animation. Through the use of this technique, students can create animated and greatly speeded-up versions of familiar environments. After the film is shot and processed, project it with different types of music and, once again, observe the effects of the different kinds of music with the visual images. Another variation of this exercise is to make continuous loops out of pieces of the total film by splicing approximately ten feet of film end to end. Using a manual threading projector, run the loop with different kinds of music, again observing the effects of the music on the visual experience. If a manual threading projector is not available, do not attempt to splice the film into a loop.

9. Animated Objects

Purpose: To illustrate the basic principles of film animation using common objects.

To do this exercise, you need a camera with a single-frame setting, a cable release, and a tripod. With the camera mounted on the tripod in a well-lighted location, focus the camera on a square of neutral-colored paper lying on the floor, positioning the camera about three feet above the paper. Be sure that the camera is directly over the paper so that all corners of the background field will be in focus. Also check the focus of the camera to be sure that objects placed on the paper will be in sharp focus. Once the camera is set up and the field of view established, do not move the camera. Place a coin in the center of the field as defined by the camera viewfinder. Shoot eighteen to twenty-four frames with the coin stationary. Now move the coin one-fourth inch and shoot two frames, move another one-fourth inch and shoot two more frames, another one-fourth inch and shoot two more frames, and so on, continuing as long as desired. When the film is projected, the coin will appear to move about the screen, demonstrating basic animation. The same kind of animated effects can be created with all sorts of common objects—marbles, toy cars, keys, pencils, and so on. It is often interesting to have a class create an animated story using objects as the actors instead of people. Small pebbles with faces painted on them can serve as excellent actors.

Still other variations of this form of animation would include animation of small dolls or clay figures. The initial animation exercise should serve as a test of the number of frames per move and the distance of each move of the object to be animated. Having made these basic animation tests, students will find a number of other possibilities for animation. Using the data derived from the tests, students should have a good idea of how far an object of a given size needs to be moved in order to create smooth, slow, fast, or jerky movement on the screen. Two film frames per object move is a good rate at which to start. Encourage the students to experiment with single-frame animation and with animation which employs three, four, or five frames per move.

For other variations of this exercise, move the camera outdoors. In the first scene, a child's tricycle can take a trip by itself to the playground. Once the field of view is established for a given shot, the camera should be positioned on a tripod and should not be moved. Shoot about eighteen single frames without the tricycle in the frame. Then introduce the front wheel of the tricycle into the left edge of the frame as seen through the viewfinder. Shoot three frames. Move the tricycle forward about six inches and shoot three more frames. Move another six inches and shoot three more frames, and so on. Be sure the tricycle has moved completely through the frame before you stop filming or it will suddenly disappear out of the frame. A variation of the beginning of the film might be to photograph the background scene without the tricycle in the frame for approximately eighteen to twenty-four frames and then place the tricycle in the center of the frame and begin the animation. When the film is screened, the tricycle will seem to suddenly pop into view in the middle of the frame. Regardless of which version of the opening is used, shoot as many different shots of the tricycle's trip to the playground as seem necessary. At the playground, combine live action with animation. Use animation to get the tricycle from one piece of playground equipment to another, and use live action at eighteen or twenty-four frames per second, for example, on a swing or slide. Using animation, the tricycle might climb the monkey bars. Students will find a number of things for the tricycle to do once they start planning the film. With appropriate music added when the film is screened, the tricycle will be made to come to life through animation.

Animation techniques can be used with any number of common objects in a variety of settings, indoors or outdoors.

In all cases, the camera must be secured on a tripod, and the field of view must be held constant for the complete shot. It is also useful for film makers to consider change of angle and image size between shots, screen direction, and screen entrances and exits when shooting animated subjects (see exercises 13 and 14).

10. Animated People

Purpose: To further illustrate principles of film animation using human subjects.

Using a camera with a single-frame release, mounted on a tripod, set up a shot which frames a person from head to foot. Move the person out of the frame and shoot about eighteen frames of the background scene. Then move the person barely into the camera's field of view and shoot three frames. Move the person about six inches ahead and shoot three more frames. Continue this process for as long as desired. When the film is run on the screen, the person will move rapidly about the frame without walking. This form of animation is not limited to single individuals, although it is best to start with one subject. Groups of people can also be animated using this technique. There are a number of variations of this form of film animation. Some of these variations have been used with success commercially.

11. Drawn Animation

Purpose: To illustrate the principles of traditional film animation.

The most common and time-consuming form of film animation involves two-dimensional drawings. With the camera positioned on a tripod or some other animation mount, photograph a series of drawings or paintings, using one or two frames for each drawing or painting. Each drawing should be changed slightly in order to create the illusion of motion on the screen. This exercise demonstrates the same principle that was explored in the flip-book exercise. Depending on the size of the change in each drawing, either one or two film frames are exposed for each sheet. Assuming that two frames are shot for each cel or drawing for projection at eighteen frames per second, it will take 540 individual drawings for one minute of screen time. As both theatrical and television cartoons illustrate, this type of animation offers almost unlimited possibilities.

12. Time-Lapse Photography

Purposes: To illustrate the use of single-frame filming for time-lapse photography. To show another way in which film may be used to modify reality.

Time-lapse photography is used to show in a short period of time events which normally occur over a longer span of time. Typically, time-lapse photography is used to record the growth of plants in order to show a complete growth cycle, which may take several months in real life, in a few minutes of screen time. To make time-lapse films, one or two frames of film are shot at given intervals over a period of time. To record the life of a plant, for example, one frame may be shot each hour using a camera with an automatic timer.

Students can experiment with time-lapse photography without elaborate equipment. For example, mount a camera on a tripod and focus on the place on the horizon where the sun will rise. Start shooting one frame per second, or one frame per minute if you wish to speed up the action on the screen, before the sun rises, and continue shooting until the sun has risen out of the camera's field of view. Be sure not to move the camera once it is on the tripod. Another simple exercise is to point the camera at the sky when clouds are moving across it and photograph the clouds at the rate of one frame per minute. The students might, as another exercise, mount the camera in the classroom and record the activity in the room, at one frame per minute, for the entire school day to show what took place there. Similarly, the camera might be mounted on a busy street, and one frame shot each minute or second over a period of time. There are many other variations that students will discover.

Time-lapse photography takes a great deal of time and patience on the part of the film makers. The results, however, can be very rewarding. Again, it is possible to add different pieces of background music to the film when it is screened and hence create a variety of impressions.

13. Shot Sequence

Purposes: To illustrate, through use, the basic sequence of shots typically associated with narrative continuity. To explore shot sizes and angles and basic camera movements.

Using a video tape recorder, a motion picture camera, or even a still camera for some elements of the exercise, film the following short, four-shot sequence: a long shot (establishing

shot), medium shot, close-up, and long shot (reestablishing shot). Typically, the long shot shows the environment in which the action will take place. A long shot of a person would thus include the full figure plus sufficient background scenery to make the environment clear. A medium shot is a closer view of a person or object. In the case of a person, a medium shot might include the subject from the waist up. A close-up includes only a portion of a larger figure or object. In the case of a person, the close-up might include only the face. An extreme close-up provides an even more limited view. In the case of a person, an extreme close-up might include only the person's eye. The four-shot sequence is a traditional pattern of shots in which the long shot is used to introduce the sequence and establish the setting, the medium shot and the close-up are used to provide details, and a final long shot is used to close the sequence and reestablish the scene of the action. In shooting such a sequence, not only should the size of each shot (LS to MS) be changed with each new camera setup but the angle from which the camera sees the subject should be changed as well. The change in angle and image size with each new shot helps to distract the viewer and makes the cuts between shots appear much smoother on the screen. The four-shot sequence described here is not a hard-and-fast form governing all film making. It is, however, a traditional form used to maintain visual continuity. There are many variations of this basic sequence. For example, a film scene might open with a very tight close-up and then move back to reveal the setting in a later shot. No matter how the sequence is arranged, it is very important to remember the concept of change of angle and image size between shots. Not only will this technique help bridge cuts on the screen but it will also make editing much simpler.

Continuing the exercise, shoot a series of shots in which are included a *low-angle shot*, looking up at the subject from below; *a high-angle shot*, looking down at the subject from above; and a *dutch-angle shot*, tilting the camera so that the subject appears tilted on the screen. Discuss with the class the impression created by each of these shots. Camera movement should also be explored. Shoot three shots, one in which the camera *pans* (moves horizontally across the frame) between two stationary objects, one in which it tilts both up and down on a subject, and one in which it zooms in and out on a subject. Notice that the speed of movement in pans, tilts, and zooms is very important. Most beginning film makers tend to move

much too quickly when panning, tilting, and zooming, and the effect on the screen is extremely distracting. Mounting the camera on a tripod is very helpful in steadying pans, tilts, and zooms. If the camera being used permits close focusing on small objects, explore the use of extreme close-up shots. Many very interesting effects can be achieved through the use of extreme close-ups of both objects and people.

This shot-sequence exercise gives students experience in a variety of film techniques. In addition, the film produced can be used as a visual dictionary for later study of basic film-making techniques.

14. Screen Direction

Purpose: To illustrate the principle of constant screen direction in order to suggest how space may be handled creatively by film makers.

Using a video tape recorder or a motion picture camera, shoot a simple action story in which a subject journeys from a first location to a second location and then returns to the starting location. Use consistent screen direction to indicate the *to* and *from* aspects of the trip, use frame entrances and exits for each shot, and vary the background or location of each shot to suggest the length of the trip. For example, start the subject moving from screen left to right in shot 1. Continue the left-to-right movement in shots 2 and 3, changing the background of each scene and having the subject enter and exit the frame in each shot. The screen direction established is thus *left* to *right*. In shot 4, have the subject turn while in the frame and move out of the frame on screen left, after having entered the frame also from the left. This turn establishes the new screen direction. Shots 5 and 6 should continue the right-to-left screen direction. Shot 7 should bring the subject back to the starting point. A variation of shot 4 would be to have the subject turn and walk directly toward the camera until the subject completely blacks out the lens and viewfinder. This movement toward the camera is a neutral screen direction. As another variation of shot 4, have the subject start with his or her back to the camera, walk away from the camera for a shot distance, and then turn to the left and go out of the frame. This movement also establishes a new screen direction, right to left, and suggests that the subject is returning to the original place. In all these versions, the screen direction has retained its visual logic throughout the journey.

As a further variation of this exercise, alternate shots of two persons, one moving screen left and the other moving screen right. This mode of shooting implies that the two persons will meet. Or, shoot a chase scene in which screen direction is reversed several times as the subjects try to elude each other. In all cases, show the changes of direction on the screen so that direction is not reversed without warning to the audience.

Another way to discuss screen direction is to refer to the *action axis*, an imaginary line drawn through the action to establish camera position. In either case, screen direction remains constant as long as the camera stays consistently on one side of the line or axis. (For further discussion of screen direction, refer to Joseph V. Mascelli, *The Five C's of Cinematography*, pages 87-136.)

15. Distraction

Purpose: To illustrate how film makers can use the principle of distraction to create a sense of filmic time on the screen and to bridge real time and space.

Distraction is a very useful device for film makers. Real time can be collapsed and real space abridged if the attention of the audience can be distracted briefly from the main line of action on the screen. A shot used to create this distraction is called a *cutaway shot*. The classic example of the use of cutaways is a film of a horse race, as illustrated in the following sequence: Show the horses lining up and breaking from the starting gate. Cut away to a shot of the crowd. Return to the race at the first turn. Cut away to a single spectator. Return to the race on the back stretch. Cut away to a group of excited spectators. Return to the horses in the final turn. Cut away to the face of another excited spectator. Return to the horses in the home stretch and show them going over the finish line. Cut away to the cheering crowd. In all, the viewer sees just five shots of the race, perhaps only one-tenth of the race in real time. Cutaways allow the film makers to illuminate a large portion of the real-time action without losing the sense of the event. Cutaways are used a great deal in narrative films, documentaries, and television news films. The distraction they provide allows the film makers to preserve a sense of real time and space without being bound to either one.

Using a video tape or motion picture camera, set up a scene of three people talking together. Shoot three shots of the group, then cut to some action away from the group for about

three seconds. Add two additional persons to the group so that when you cut back to the original group, it has grown from three members to five. The brief cutaway will bridge the addition, and viewers will accept the additional members of the group without concern. Distraction through the use of a cutaway will have served its purpose.

As a variation of this exercise, have a person go from one place to another. Show the person starting to walk. Cut away to a shot of traffic on the street. Show the person walking past another location. Cut away again. Return to the walking, and so on. The cutaways suggest that time has passed and the person has moved to a new location. Used another way, cutaways can function to foreshadow future action, showing what the subject will encounter before he or she encounters it.

In a further variation of the exercise, shoot a brief documentary or news report which takes at least ten minutes in real time. Insert cutaway shots between shots which show the essential action of the event. This technique is frequently used in television news filming; it permits brief coverage on film of events which took much longer in real time. A common example of this technique is television coverage of a fire in which the viewer sees shots of the fire, cutaways of the crowd, other shots of the fire, a cutaway of a fire truck, other shots of the fire, a cutaway of spectators, and so on. The cutaway is an extremely valuable tool for film makers. It is also a traditional concept in film continuity. Explore the various ways in which cutaways can be used.

16. Visual Composition

Purpose: To discover and illustrate ways of treating visual space within the film frame through changes in composition.

Following are ten simple examples of basic compositional problems. Using a still camera, video tape recorder, or motion picture camera, set up each situation and shoot it. Work out other compositional problems and film them also. When the exercise is finished and the film processed, project the film or run the tape and discuss with the class how the various compositional situations could be employed in a film and what the effects of the composition on the scene might be.

Example 1

Using a single subject, proceed as follows (see diagram): (a) Set up a head-and-shoulder shot, with the subject facing screen right, centered in the frame, with equal space on both

the left and the right. Shoot about three feet of film. (b) Move the subject into the left half of the frame, facing right. The space on the right should be open. Shoot another three feet or so of film. (c) Move the subject into the right half of the frame, facing right, with the left half of the frame open. Shoot another three feet of film. When the film is returned, discuss with the class which composition is the most pleasing and how this pattern of composition may be applied to other situations.

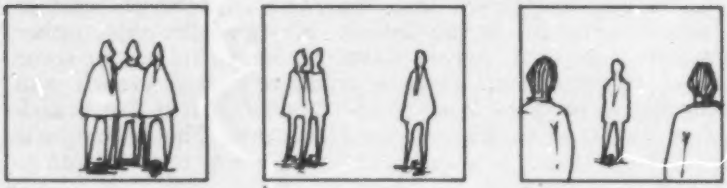
Example 2

Using two subjects, proceed as follows (see diagram): (a) Set up a medium shot in which the subjects are placed in the center of the frame, facing each other. Shoot about three feet of film. (b) Now move subject 1 to the left of the frame and shoot over that subject's right shoulder into the face of the second subject. This shot is called, logically, an *over-the-shoulder shot*. Notice how this second composition adds depth to the frame and focuses attention on the subject facing the camera.

Example 3

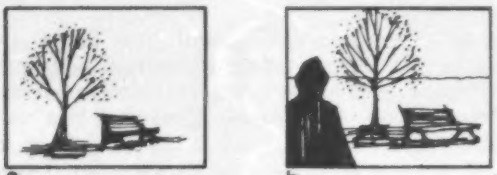
Using three subjects, proceed as follows (see diagram): (a) Set up a medium shot of the three persons grouped in the center of the frame, talking to each other. Shoot about three feet of film. (b) Move one person to frame right and the other two to frame left. They should continue to look at each other. Shoot about three feet of film. Note how the composition now

suggests confrontation between the one person and the other two. (c) Move one subject to frame right, one to frame left, both facing away from the camera. Place the camera slightly behind them, including their heads and one shoulder in the right and left sides of the frame, and shoot into the face of the third person, who should be standing about five feet in front of the other two, looking at the camera. Shoot about three feet of film. Note how this composition adds depth by framing the scene. What is the psychological effect of the shot?



Example 4

Proceed as follows (see diagram): (a) Shoot a general scene of a building, street, or park. (b) Next, bring a person into the left foreground of the frame and shoot the scene again with the person standing to the left, framing the scene. Notice how the person adds depth to the scene in the second composition.

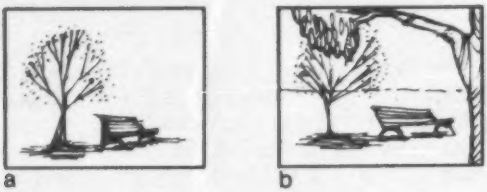


Example 5

Proceed as follows (see diagram): (a) As in example 4, shoot another general scene. (b) In the second version of the shot, use some sort of object to frame the scene and add depth. The object should be placed either at the right or left edge of the frame. (c) For another variation of the shot, shoot through or across an object, such as a chair, table, or bicycle. Notice again how the foreground objects add depth and frame the scene.

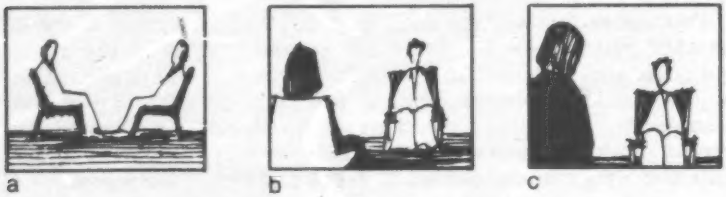
Example 6

Proceed as follows (see diagram): (a) Shoot another general scene. (b) In the second version of the shot, either move the camera to include a tree branch to frame the scene across the top of the viewfinder frame or a small branch with some leaves on it in front of the camera so that the branch leaves frame the scene across the film frame. This technique is called *foreground treatment* and is another way to add depth to a scene.



Example 7

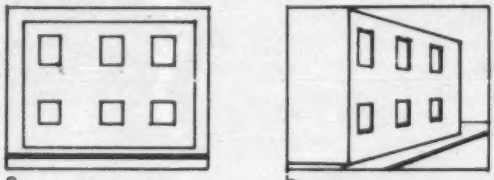
Proceed as follows (see diagram): (a) Shoot a scene in which two people are sitting center frame talking to each other. (b) Move the camera to shoot over the shoulder of one person into the face of the second person. This shot is a variation of the over-the-shoulder shot. (c) Have the subject at frame left stand up, and shoot over this subject's shoulder down into the face of the seated subject. This shot is another variation of the over-the-shoulder shot. Notice how both of the last two



compositions add depth to the frame and give dominance to one subject. The composition also serves to comment visually on the relationship between the subjects.

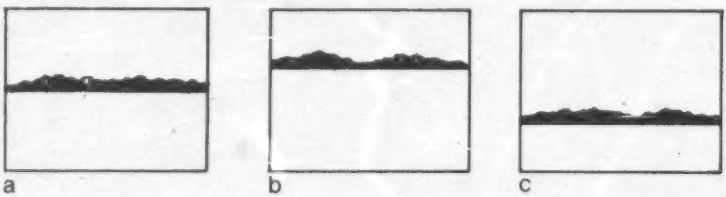
Example 8

Proceed as follows (see diagram): (a) Shoot a scene of a building with the camera placed directly in front of the building. The building should be quite flat in the frame. (b) Move the camera to the left and shoot across the front of the building at about a 45° angle so that the far side of the building recedes into the distance. Try varying the angle from which the building is shot. Use this same type of angled composition on other objects and situations. Notice how depth and visual interest are added to the scene when the camera is moved to shoot the building or object from an angle rather than straight on.



Example 9

Select a scene with a strong horizon line and proceed as follows (see diagram): (a) First shoot the horizon exactly in the center of the frame. (b) Shoot a second shot with the horizon placed two-thirds up the frame. (c) Shoot a third shot with the horizon lowered to cut across the frame one-third from the bottom. Which composition is the most pleasing? What variables within the scene—such as clouds in the sky, green grass, and water in the foreground—have to be considered in the composition?



Example 10

Set up a scene in which a subject runs toward the camera, entering slightly from frame left and exiting next to the camera on frame right, and proceed as follows (see diagram): (a) Shoot the shot first with the camera at eye level. (b) For the second shot, lower the camera to ground level in order to shoot up at the running subject. Try other variations in camera positions. Which shots create greater feelings of action and excitement?

The examples just presented are very common compositional situations. Students should be encouraged to explore other compositional problems and solutions. (For an excellent discussion of composition in film, refer to Joseph V. Mascelli, *The Five C's of Cinematography*, pages 196-246.)

17. Color Manipulation

Purposes: To demonstrate the concept of color temperature of light. To show how the color response of motion picture film can be modified through careful use of light.

For this exercise use a still camera loaded with color film balanced for daylight, a 16mm motion picture camera loaded with daylight color film, or a super-8 camera on the daylight setting. Film labeled "daylight" is made to reproduce colors accurately when used in midday sunlight, approximately 5500° Kelvin. In other lighting situations, the color rendition of the film shifts away from what is generally accepted as "normal" color reproduction. Some of these shifts can be used very creatively by film makers.

Start the exercise outdoors. Shoot a scene with one actor, in medium shot, using bright sunlight as a key light (from front, above, and slightly to the right or left of the actor). After the film is processed, notice that the flesh tones are accurately reproduced, although there will probably be some strong shadows on the face. Next, shoot the same scene with the sun

used as back light, directly behind the subject, striking the back of the head and shoulders. Notice the halo and rim-light effects. In this situation, flesh tones should reproduce acceptably, and the general color rendition of the scene should be good. When shooting in this situation, the film makers must remember to expose for the subject's face. Otherwise, the face may be underexposed. Exposing for the face, however, may cause the background to be slightly overexposed. Film makers need to experiment to discover the proper exposure for this situation. Now move the subject into the shade of a tree and shoot the same scene. Some slight sunlight may strike the subject. In the processed film the scene probably will appear to have taken on a slightly blue cast even though there is some sunlight in it. This effect is caused by the difference in color temperature of the light in the shaded area. Shadow is the absence of sunlight. The lighting in shadowed areas comes both from reflected sunlight and from skylight. The skylight is higher in color temperature than sunlight and therefore appears bluer than the sunlight. Next, move the subject into the deep shadow of a building and shoot the same subject without any direct sunlight illumination. The general blue cast should be even more noticeable in this situation, although flesh tones may still reproduce acceptably. Again, the blue cast comes from the absence of sunlight and the resulting higher color temperature in the shadow area.

To continue the exercise, move indoors. On super-8 cameras, *do not* switch from the daylight setting. With the subject inside a building, using conventional light bulbs, shoot a scene. The color reproduction in this scene will shift strongly toward the red end of the spectrum since the color temperature of standard tungsten light bulbs is about 2800° Kelvin, lower than sunlight and therefore "warmer" or more red. Next, shoot the same scene in a room illuminated entirely by fluorescent lamps. Fluorescent lamps tend to range widely in color temperature, creating a major problem in lighting for film. Some will cause a filmed scene to shift strongly toward blue and bluish-green. Others will provide a warm, reddish cast. The human eye might not notice the differences in color temperature of fluorescent lighting, but these differences are quite apparent on film. When planning to shoot in a situation lighted with fluorescent instruments, film makers must run tests to determine how the film stock to be used responds to the lighting. Filters may be purchased which, when placed in front of the lens during shooting, help correct the color balance

of fluorescent lighting. These filters are usually available where film equipment and supplies are sold. Next, shoot the same scene illuminated by regular photoflood or reflector flood lamps. Notice that the color is again reddish because the color temperature of most photoflood lamps is either 3200° or 3400° Kelvin, 2100° or 2300° Kelvin lower than the color temperature for which daylight film is balanced. One solution to the problem of color balance is to use blue-tinted photoflood lamps, which produce light at 4800° Kelvin. Using a blue-tinted photoflood, shoot the scene again. This lighting should provide the most nearly normal color reproduction attainable, although there will still be a slightly reddish cast to the film. Unfortunately, blue-tinted photofloods are not carried by all photo supply stores. If the whole film is to be shot indoors, film makers usually purchase film balanced for tungsten light. Lighting instruments used to illuminate the scenes in this case should be rated at 3200° or 3400° Kelvin.

If a super-8 camera is used for this exercise, note that the color balance of the super-8 film is controlled by a filter system built into the camera. Super-8 film, as packaged, is color balanced for artificial light. When the film cartridge is inserted in the camera, a filter is automatically placed between the lens and the film, correcting the color balance of the film for daylight shooting. Most super-8 cameras have a setting for bulb or tungsten light. When this setting is used, the built-in camera filter is moved out of the path of the light. The film can then be used in artificially lighted situations at 3200° or 3400° Kelvin and will reproduce colors acceptably. When purchasing 16mm or 35mm film, specify whether you want film balanced for daylight or for artificial lighting.

If possible, with daylight film still in the camera or with the super-8 camera set for daylight, take the subject back outside and shoot a scene in an exterior location about fifteen minutes after sunrise and then again thirty minutes past sunrise. Do the same thing about an hour before sunset and again just at sunset. When the film is processed, observe the changes which have occurred in the color balance of the scenes as a result of different lighting conditions. Many photographers prefer to shoot in the morning or late in the day in order to take advantage of the color temperature of light at these times. Generally, shooting in the early morning or late afternoon gives the film a warmth which cannot be obtained in other lighting situations. A further variation would be to shoot several scenes on an overcast day to observe the changes in the

appearance of the film under these lighting conditions. Again, the effects obtained in cloudy weather are often very pleasing and complement the mood of the film.

After the exercise has been completed and the film processed, project it and discuss with the class how various changes in color balance can be used creatively by film makers. Once again, this exercise can be useful as a teaching aid on the subject of film lighting.

18. Lighting for Film

Purpose: To demonstrate conventional forms of motion picture lighting for both exteriors and interiors.

Using a still camera, a video tape recorder, or a motion picture camera, establish an exterior scene with one actor in an area lighted by direct sunlight, if possible in midmorning or midafternoon so that the sunlight strikes the subject at a slightly downward angle. In this exercise the camera should always shoot into the subject's face, so the camera must be moved between shots. First, shoot about a ten-second shot in which the sunlight strikes the person directly in the face. Notice that the features appear somewhat flattened and the nose shadow falls on the upper lip. Depending on the angle of the sun, the eyes may also be heavily shadowed. Second, turn the subject so that the sun strikes the face at a slight angle either to the left or right of the middle of the face. The nose shadow will be cast slightly to the side, and the face will take on more of a three-dimensional quality. This position is conventional for a key light in an interior motion-picture setup. Third, turn the subject so that the sun fully illuminates one ear and thus falls strongly across the face. Notice the effect of this harsh cross-lighting on the face. One side of the face should be brightly illuminated and the other side heavily shadowed. Fourth, turn the subject so that the sun strikes the back of the head and serves as a back light. Notice the halo effect on the hair and the rim of light cast on the shoulders. In this shot, expose for the face, which will be shadowed since the sun is behind the subject. Many professional photographers and cinematographers prefer to use the sun as a back light in this manner when shooting in an exterior setting. In order to lighten the shadowed face, a reflector may be used. For example, a sheet of white poster board approximately thirty-by-forty inches in size held about three feet away and facing the subject can be used to reflect some sunlight back on the face and thus soften shadows. Another type of reflector can be

made by gluing crumpled aluminum foil to a thirty-by-forty-inch piece of Masonite. Reflectors may also be purchased from motion-picture equipment houses.

An interesting contrast in lighting can be obtained by shooting several shots of the same subject on a cloudy day and in the shade on a sunny day, or about half an hour after sunrise and just before sunset. Observe the lighting textures created in these situations.

To continue the exercise, move indoors. Using a photoflood lamp in a reflector housing a reflector spot or flood, or a spotlight, experiment with interior light placement and its effect on the subject. Shoot the following sequence of shots: place the light directly above and shining down on the subject's head; place the light at the subject's feet at floor level and shine it upward into the subject's face; place the light at camera position directly in front of the subject and shine the light directly into the face; move the light to the side of the subject so that the face is cross-lighted; and move the light back to camera position, but raise the light about eight feet above floor level and about three feet to the right or left of the camera. Observe the effect on the subject's face in each of these lighting positions, and decide what kinds of dramatic situations would be best served by each. Now use three lights on one subject—the first, the *key light*, from the right front of the subject, shining down on the subject's face from about a 45° angle; the second, the *fill light*, on the side of the subject opposite the key light and about half as intense, softening the shadows of the key light; the third, from behind the subject, illuminating the head and shoulders with a rim of light. If a fourth light is available, use it to light the background, to lessen the contrast between subject and background. Such a three- or four-light setup illustrates a common use of lighting instruments in an artificially illuminated environment.

Still another effect may be obtained through the use of *bounce light*. In this situation, no instruments are aimed directly at the subject; rather the lighting instruments are aimed at the ceiling or the walls or other reflecting surfaces so that the entire space is flooded with soft, shadowless light. Bounce light is so termed because the light is bounced or reflected from the ceiling or other flat surface onto the subject to be photographed. In another application of bounce light, one lighting instrument may be used as a key light while the other lights are bounced off the ceiling or walls to provide a general level of soft illumination. Bounce light can be used in confined

areas to provide an excellent quality of soft, overall illumination.

Purpose: To illustrate various ways in which the filmed image may be manipulated in the camera by placing various materials in front of the lens.

19. Special Visual Effects

Purpose: To illustrate various ways in which the filmed image may be manipulated in the camera by placing various materials in front of the lens.

Using a still camera, a video tape recorder, or a motion picture camera, shoot a subject normally lighted in an exterior situation. Next, hold a layer or two or cheesecloth or a nylon stocking in front of the lens and shoot the subject. Notice how the fabric softens the image. Shoot the subject through a piece of glass on which Vaseline has been smeared, leaving only the center of the glass clear. This effect is often used to suggest a dream state or unreality. Experiment with other transparent materials to change the appearance of the image. When using color film, try shooting through different colored materials. If they are available, experiment with special-effects filters, which can be used, for example, to create a starburst effect around lights or to produce multiples of a single image. If the motion picture camera being used permits filming above or below eighteen frames per second, experiment with both slow and fast motion. Shooting at fifty-four frames per second or above and projecting at eighteen or twenty-four frames per second will give the appearance of slower-than-normal motion on the screen. Fast motion can be created by shooting at twelve frames per second or below and projecting at eighteen or twenty-four frames per second. Explore other kinds of special visual effects which may be created with the camera. Discuss with the class how the special visual effects created would be used in a film.

20. Writing a Film Script

Purpose: To illustrate the principles involved in translating verbal material into a visual form.

This exercise is done in the following four stages: (a) Have students write a simple action story in narrative form, perhaps working as a group. (b) Using the concept of film shots, have students break the story down into its visual components, noting what action or dialogue is to be included in each shot or

each new camera setup. When analyzing the shots, consider the location for each shot; what point of view the action should be filmed from; whether the action calls for a long shot, a medium shot, or a close-up; and how much action should be included in each shot. The shot breakdown might be written on five-by-ten-inch cards or on single sheets of paper, one shot to each card or sheet. The size of the shot should be noted on the card or sheet, using the abbreviations LS for long shot, MS for medium shot, and CU for close-up. (c) When the story is broken down into shots, assemble the shots into what the class considers to be the most effective visual order for the proposed film. The sequence of events may need to be somewhat different in the film than in the written narrative. While the setting of the narrative was established in a few words, several film shots may be needed to establish the place and time of the story. For example, the narrative might begin as follows: "As she left the house that bright Monday morning, Mary was surprised to see that there were no cars at all on her usually busy street." The following shot breakdown might be called for: an establishing long shot of Mary's house or apartment building; a medium shot of Mary opening the door and coming out; a close-up of her face as she looks around, surprised; a medium shot of the street at which Mary is looking, from her point of view, first panning down the street to the right, then panning back up the street to the left; another close-up of Mary's face as she says to herself, puzzled, "Where are all the cars?" and, finally, a long shot as Mary walks out of the frame, away from the house toward the street. (d) Using the arrangement of story elements determined by the shot analysis, rewrite the story as a film script, describing each shot and the action or dialogue which takes place in it. The following film script might be developed from the story just described:

1 LONG SHOT, EXTERIOR, EARLY MORNING, FRONT OF HOUSE OR APARTMENT BUILDING.

This shot shows only the front of the building. There are no people around.

2 MEDIUM SHOT, EXTERIOR, EARLY MORNING, FRONT DOOR AREA OF HOUSE OR APARTMENT BUILDING.

A young girl, dressed for school, opens the door, pauses to say good-bye to someone inside, and looks off camera, toward the street.

3 CLOSE-UP, EXTERIOR, EARLY MORNING, GIRL'S FACE.

She frowns in surprise as she looks toward the street.

4 MEDIUM SHOT, EXTERIOR, STREET WITH NO CARS OR PEOPLE. FROM THE GIRL'S POINT OF VIEW.

The shot suggests that there should be traffic at this time of day. Pan right, then back left, as though the girl is looking down, then back up the street.

5 CLOSE-UP, EXTERIOR, GIRL'S FACE.

MARY
(Puzzled, speaking to herself)
That's funny. Where are all the cars?

6 LONG SHOT, EXTERIOR, GIRL IN FRONT OF BUILDING.

Girl pauses for a moment, then walks out of frame to the right. Her manner should suggest that there is something wrong with the world this morning, but she is not sure what it is.

The exercise is complete with the writing of the script. After the script is written, however, it can be filmed as a class project. If the class does not have access to sound film equipment or video tape, the script could be written in both sound and silent versions. In the silent version, the visual materials would have to be reworked to cover concepts which would be carried by dialogue in the sound version.

21. Adapting a Story to Film

Purpose: To explore further the principles and techniques involved in adapting material from a verbal to a visual medium.

Have students select a short story, a scene from a book, or even a story from a lower-grade reader and break it down into component film shots. The emphasis should be on how to make the story visual for the screen. Dialogue from the story might have to be rewritten or eliminated for the film version. Careful attention should be paid to the use of objects, textures, and locations as they contribute to the visualization and story. The exercise should result in a script which could be filmed by the class.

22. Variety, the Spice of Shooting

Purpose: To illustrate graphically that there is no single right way to shoot any film story.

Using a motion picture camera or video tape recorder, give a story outline to three different film crews and ask them to make a film from the outline. No other restrictions should be placed on the project. When the films are completed, run the different versions in class, discuss the apparent differences with the class, and try to discover the motivations for the variations made on the basic story outline. Another version of

this exercise would involve making several prints of the same film sequence and having different people edit the sequence to demonstrate that in film making, in both shooting and editing, there is no single way to shoot or cut a scene.

23. How to Do It

Purpose: To give film makers experience in shooting a film which depends on carefully controlled, sequential action.

Make a short film which shows visually how to do a simple task, such as making a paper airplane. Break the process down into its component parts, visualize each step on a storyboard, and shoot the film from the storyboard.

24. Action Narrative

Purpose: To give film makers experience in applying the principles of narrative film story telling to an action situation.

Write an action story short enough to be made into a film with about twenty shots. Break the action down into its component parts, script the story, storyboard it, cast it, rehearse it, shoot it, and edit it. The film probably should be shot out of sequence so that the film makers experience shooting in this fashion and then constructing the story by editing. If editing equipment is not available, then the story can be shot in sequence and edited in the camera.

25. Documentation with a Camera

Purpose: To give film makers experience with action which they cannot control and with the techniques of documentary filming.

Choose a subject on which to make a documentary film—your class, your school, your neighborhood, a person you know, or a place you know. Plan the sequences which should be shot, and devise a shooting plan for the film. Shoot the film, keeping in mind the need for continuity and distraction materials—cutaways—which will permit the abridgment of time and space in editing. Shoot the film and edit it. Add sound to the film either through the use of recorded wild sound or recorded narration track.

26. Persuasion with a Camera

Purpose: To give film makers experience in creating a film which takes a side on an issue and selects images which support a particular point of view.

Choose a topic on which there is more than one side, for example, the need to beautify your neighborhood. Plan, script, shoot, and edit a film in which the images support a particular point of view in regard to the chosen topic. Consider the intended audience and how to adapt the plan to that audience. Although a narrative and music track can be used with the film, the persuasion should come through the visual images chosen which have specific meaning for a clearly defined audience.

27. Television Commercial

Purpose: To give film makers experience with a specific form of visual persuasion.

Choose a product or a concept on which to base a television commercial. Although music and narration may be used, they will probably not be synchronized with the action of the film. Therefore, the message of the film should be made visually, through the images chosen. Design a sequence of shots which lasts no longer than sixty seconds and which makes the product or idea appealing to a specified audience. Script, storyboard, and shoot the commercial. Using a wild track, add music and narration.

28. Filming an Abstract Concept

Purpose: To give film makers experience with a very difficult form of film making by having them shoot a film dealing with an abstract concept.

Choose an abstract concept such as *loneliness* and select images which will make this concept concrete and can be connected together in a film. Script, storyboard, and shoot the film. Add appropriate music and/or narration, but use the visual images as the principal carriers of the concept. Having made the film on loneliness, it would be interesting to have the class redesign the sound track to make the film a happy one, presuming that the loneliness film would not be a particularly happy one. This variation would illustrate the importance of music and narration to the mood of a film.

Selected Bibliography

Introduction to Film Study

Fell, John L. *Film: An Introduction.* New York: Praeger Publishers, Inc., 1975.

Solomon, Stanley J. *The Film Idea.* New York: Harcourt Brace Jovanovich, Inc., 1972. [ED 064 877]

Film History

Jacobs, Lewis. *The Rise of the American Film.* New York: Teachers College Press, 1968.

Knight, Arthur. *The Liveliest Art.* New York: New American Library, Inc., Mentor Books, 1957.

Macgowan, Kenneth. *Behind the Screen.* New York: Dell Publishing Co., Inc., 1965.

Mast, Gerald. *A Short History of the Movies.* New York: Pegasus, 1971.

White, David Manning, and Richard Averson. *The Celluloid Weapon.* Boston: Beacon Press, 1972.

Documentary Film

Barsam, Richard Meran. *Nonfiction Film.* New York: E. P. Dutton & Co., Inc., 1973. [ED 078 458]

Jacobs, Lewis, ed. *The Documentary Tradition.* New York: Hopkinson & Blake, Inc., 1971. [ED 066 005]

Experimental Film

Curtis, David. *Experimental Cinema.* New York: Universe Books, 1971.

Youngblood, Gene. *Expanded Cinema.* New York: E. P. Dutton & Co., Inc., 1970. [ED 053 560]

Film Theory

Giannetti, Louis D. *Understanding Movies.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972.

Mast, Gerald, and Marshall Cohen. *Film Theory and Criticism.* New York: Oxford University Press, Inc., 1974.

Stephenson, Ralph, and J.R. Debrix. *The Cinema as Art.* London: Penguin Books, Inc., 1965.

Film Production

Bobker, Lee R. *Making Movies from Script to Screen.* New York: Harcourt Brace Jovanovich, Inc., 1973. [ED 087 059]

Lipton, Lenny. *Independent Filmmaking.* San Francisco: Straight Arrow Books, 1972.

Mascelli, Joseph V. *The Five C's of Cinematography.* Hollywood: Cine/Graphic Publications, 1965.

Roberts, Kenneth H., and Win Sharples, Jr. *A Primer for Film-Making.* New York: Pegasus, 1971. [ED 056 463]

Smallman, Kirk. *Creative Film-Making.* New York: Macmillan, Inc., 1969. [ED 048 758]

Other Titles in the Theory into Practice (TIP) Series

Individualizing Writing in the Elementary Classroom by Iris M. Tiedt. Contains detailed suggestions for involving children in individualized writing activities that will stimulate spontaneity and fluency in composition. 1975. (ERIC/RCS and NCTE) NCTE Stock No. 23058, members $1.00, nonmembers $1.10.*

Instruction in and about Small Group Discussion by Kathleen Galvin and Cassandra Book. Designed to help the teacher accustom students to the sort of constructive interaction for problem solving and other ends that is becoming increasingly important in school as well as in students' later lives. 1975. (ERIC/RCS and SCA) SCA members $1.40, nonmembers $1.50.

Nonverbal Communication in the Elementary Classroom by John M. Wiemann and Mary O. Wiemann. Discusses aspects of nonverbal behavior which can be used by teachers and also should become part of the student's repertoire of self-expression, and offers a series of classroom exercises for exploring nonverbal communication. 1975. (ERIC/RCS and SCA) SCA members $1.40, nonmembers $1.50.

Observing and Writing by George Hillocks, Jr. Discusses the lack of specificity in writings of students at all levels; describes activities to surmount this problem by increasing students' powers as observers and recorders of sensory experience. 1975. (ERIC/RCS and NCTE) NCTE Stock No. 33967, members $1.00, nonmembers $1.10.*

Theater Games: One Way into Drama by James Hoetker. Offers the teacher who lacks workshop experience in conducting creative dramatics a series of basic activities with which to begin. Gives suggestions to help teachers shift from the role of dispenser of information to that of a facilitator who learns along with the students. 1975. (ERIC/RCS and NCTE) NCTE Stock No. 53623, members $1.00, nonmembers $1.10.*

*Available from the National Council of Teachers of English, 1111 Kenyon Road, Urbana, Illinois 61801.